What's NEXT?

The Nationwide Evaluation of X-Ray Trends (NEXT) is a national program conducted annually to measure the x-ray exposure that a standard patient receives for selected x-ray examinations. This program is conducted jointly by the Conference of Radiation Control Program Directors (CRCPD), an association of state and local radiation control agencies, and the Food and Drug Administration's (FDA) Center for Devices and Radiological Health (CDRH).

Facilities are randomly selected and the surveys are performed by personnel from the participating states. Each projection is surveyed utilizing a clinically validated exposure equivalent phantom representing a standard reference patient. This standard NEXT patient stands 172 cm (5 ft, 8 in) in height, and weighs 74.5 kg (164 lbs). The phantom used for chest is equivalent to a patient thickness, measured P/A, of 23 cm (9 in).

In 1994 the selected examination was the P/A Chest. Over 300 facilities were surveyed, with the sample divided equally between hospitals and non-hospital facilities. Specific information was obtained pertaining to the equipment, facility work load, and radiographic technique. Information regarding such items as film/screen combination, grid type, and beam quality is also collected. X-ray output was determined for calculation of P/A entrance exposure using the NEXT phantom and film processing was evaluated. The procedure followed in 1994 was essentially the same as that used for the 1984-86 NEXT chest studies.

The information contained herein is for guidance. The implementation and use of the information and re-commendations are at the discretion of the user. The mention of commercial products, their sources, or their use in connection with material reported is not to be construed as either an actual or implied endorsement by CRCPD or CDRH.

SURVEY RESULTS

YOUR FACILITY

KVp _____

mAs _____

ESE _____

Processing speed

STEP* test result _____

1994 Survey Findings

mean ESE for kVp >90:
with grid = 17.1, non-grid = 10.7
mean ESE for kVp 60 - 90:
with grid = 26.1, non-grid = 10.5
mean kVp: hospitals = 110
private practice = 93
mean mAs: hospitals = 5.26
private practice = 10.3
mean HVL: hospitals = 4.1
private practice = 3.5
mean processing speed:
hospitals = 115
private practice = 107

Previous Findings

	Hospitals 1984	Private 1986
mean ESE with grid	17.7	19.9
non-grid	10.1	13.7
mean kVp	104	87
mean HVL	4.1	3.4
mean processing speed	97	85

* Sensitometric Technique for the Evaluation of Processing

Nationwide Evaluation of X-Ray Trends (NEXT)

1994 P/A Chest X-Ray Data

Conference of Radiation Control Program Directors

and

The Center for Devices and Radiological Health

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Food and Drug Administration